



# Evaluation of the pilot stage of the Pharmacy Needle Exchange Programme in Ireland

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## Foreword

Needle exchange programmes represent a health promotion intervention for injecting drug users, and are a core element of the harm reduction approach to the area of addiction treatment. The importance of such programmes in reducing the incidence of Blood borne viruses, in engaging positively with drug users as a means of educating them about risks associated with using non sterile equipment and in referring them to treatment services is well established.

The Pharmacy Needle Exchange (PNEX) programme in Ireland was developed as a response to Action 34 of the *National Drug Strategy 2009-2016*, i.e. “expand the availability of, and access to needle exchange services (where required)”.

The introduction of the pilot Community pharmacy based needle exchange programme in October 2011 was a partnership initiative between the Health Service Executive, the Irish Pharmacy Union (IPU) and Elton John AIDS Foundation (EJAF). This initiative has been instrumental in promoting the expansion of services into areas that had previously limited access to needle exchange programmes.

In line with best practice the Steering Group of the HSE Pharmacy Needle Exchange Programme commissioned Liverpool John Moores University (LJMU) - in partnership with Waterford Institute of Technology (WIT) - to carry out an external evaluation. The rationale, methodology and outcome of the evaluation are well laid out in this report and represent a very important overview of the effectiveness of the initiative.

The evaluation demonstrates a significant range of benefits to both service users and service providers throughout the delivery of the programme. A series of recommendations is also included too further strengthen the programme, these include: increasing accessibility of services, tailoring interventions and the provision of further training of staff to support them in delivering the programme effectively and consistently. These recommendations and the report highlight the valuable role that the Community Pharmacist can play within the Addiction Services and the Health services in general. They also represent further evidence of the benefits of the Harm Reduction approach to the problem of injecting drug use.

I am pleased to accept this evaluation and thank all those who have contributed to the positive outcomes of this programme. I welcome the findings and confirm the intention of the HSE Primary Care/ Social Inclusion Division to support further expansion of the programme wherever possible and appropriate.

Dr Eamon Keenan  
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The Irish Pharmacy Union (IPU) was pleased to collaborate with the Health Service Executive (HSE) and the Elton John AIDS Foundation in the design, launch and rollout of the Pharmacy Needle Exchange (PNEX) Programme in 2011.

The PNEX is now established in over 100 pharmacies across the country within communities where this service was previously unavailable or where access to such services was limited. The uptake from pharmacies in terms of offering the service highlights the willingness of pharmacists to up skill where necessary, and to diversify the range of services they offer to different patient groups for the benefit of their communities.

We welcome the publication of the evaluation of the PNEX carried out by Liverpool John Moores University (LJMU), who worked in partnership with Waterford Institute of Technology (WIT). The study identifies further patient cohorts that may benefit from the service. It also identifies opportunities to increase the range services that are offered to this, and potentially other patient groups within pharmacy, such as Blood Borne Virus (BBV) testing services. The evaluation reflects positively on pharmacists' interactions with this patient cohort, in terms of health advice, particularly in circumstances where pharmacists are likely to be one of the only health professionals these patients encounter on a regular basis.

The findings of the study highlight the importance of expanding the role of the pharmacist and the benefits of collaboration between the HSE, pharmacy and charitable organisations, such as the Elton John AIDS Foundation, to alleviate pressure on the health service and improve access to healthcare for all patients.

## **Glossary of terms**

BBV	Blood borne virus
HSE	Health Service Executive
LGBT	Lesbian, gay, bisexual and transgender
MSM	Men who have sex with men
NICE	National Institute for Health and Care Excellence (UK)
NSP	New psychoactive substance
PIED	Performance and image enhancing drug
PNEX	Pharmacy Needle Exchange programme
PWID	People who inject drugs

# Executive Summary

## The Pharmacy Needle Exchange Programme in Ireland

The Pharmacy Needle Exchange (PNEX) Programme is a partnership initiative between the Elton John Aids Foundation, Irish Pharmacy Union and the HSE PNEX Programme which began operating in October 2011. The development of the programme is aligned with Action 34 of the *National Drug Strategy 2009-2016* to “expand the availability of, and access to needle exchange services (where required)”.

For needle and syringe programmes to be effective they must reach as many individuals as possible (AIDS Projects Management Group, 2007) and the World Health Organisation state that increasing access to needles and equipment amongst PWID contributes greatly to tackling BBVs (WHO, 2004). The provision of pharmacy based needle exchanges in a variety of rural and urban settings is likely to be a key step towards achieving broad coverage and reducing the risk of HIV and other BBVs in Ireland. This study was undertaken to evaluate the three year pilot stage of the programme and progress in delivering needle exchange services to people who inject drugs (PWID), and aimed specifically:

- To understand client and stakeholder satisfaction with needle exchange and attitudes towards and experiences of these services.
- To provide data relating to safer injecting, safer sexual behaviour and the prevalence of blood borne viruses that can be used in comparison to international literature and can be measured against in future evaluations.
- To provide recommendations regarding the development and delivery of services and policy.

## Methodology

All pharmacies participating in the Programme in April 2014 were eligible to take part in the study and staff were asked to complete an online survey. Pharmacy staff were asked to opt in to additional parts of the research including:

- i) Participating in an interview with a member of the research team, and
- ii) Encouraging clients to take part in the research through completion of a questionnaire.

Pharmacies that agreed to opt into the client research were provided with questionnaires, which staff were requested to ask any client using the needle exchange to complete. Telephone interviews were arranged with staff from pharmacies that consented to take part. Visits were made to five of the ten pharmacies participating in the programme with the greatest number of monthly transactions, where needle exchange clients were approached by a member of the research team and asked if they would like to participate in the study through an interview.

Questionnaires and interview schedules were developed for this study. For staff these included an online questionnaire and semi-structured interview schedule examining their perceptions and experiences of delivering needle exchange. For clients, a questionnaire and interview schedule was designed to examine their drug use and related behaviours and experiences with pharmacy needle exchange.

A brief online consultation with stakeholders was undertaken, examining their perceptions of Programme effectiveness and identifying strengths, weaknesses and areas for development.

## **Results**

Of the 107 eligible pharmacies, a total of 70 participated in the study. Reasons why the 37 pharmacies did not take part included: refused to take part (n=4), needle exchange service was not yet operational or had ceased to operate (n=12) and that the needle exchange was operating but no clients had attended the service at the time of the research (n=21). Of the 70 participating pharmacies, staff at 30 pharmacies agreed to an interview and staff in 28 pharmacies agreed to administer the client questionnaire. Eight pharmacies returned completed client questionnaires to the research team and clients at an additional five pharmacies completed surveys during the site visits. During visits, six clients consented to take part in an interview.

### **Results for pharmacy staff**

#### *Experience of service provision*

Pharmacy staff reported a variety of service successes in terms of their own development and job satisfaction, increased access for clients to needles and health professionals and for the community through reduced needle disposal in public places. The service was described in interviews as quick and efficient with minimal impact on the running of other pharmacy activities. Uptake was viewed as sporadic in some sites, with comments around levels of heroin availability impacting on injecting rates. Increasing uptake was reported in some sites, but with no change in gender profiles. The majority of staff reported positively about the needle exchange and clients, although negative impacts of the service identified by small numbers of staff included the risk of crime and undesirable behaviour in the pharmacy and surrounding area. Where pharmacies were located within shopping areas, it was apparent that some local businessmen and security objected to the needle exchange.

#### *Engagement and trust in the needle exchange*

The majority of staff surveyed believed they had engaged well with clients, although difficulties identified included a lack of interest in engagement from some clients. The exchange itself was described by the majority of interviewed staff as a quick process, with service users appearing anxious to leave the site. Lack of interaction was generally due to service user reluctance to engage, and pharmacist lack of time and while it was recognised that clients may like the speedy transaction this limits the opportunity to offer further intervention. The development of a relationship based on respect and empathy between exchange participants was viewed as important in increasing uptake in the needle exchange. First contact characterised by friendliness on the part of the pharmacist and frontline staff was viewed by many as being vital when initially developing positive relationships.



### *Needle and equipment provision*

Many positive comments were made around the contents of the provided safe injecting kits. Pack size options were described by the majority of interviewees as optimising efficiency and discretion for the user, and that service users generally chose to take the 3 pack. Many participants observed that service users report that needles and syringes provided are not the right size or right volume, and identified that needles for groin injecting would be a useful addition. Further potential additions to packs included citric, tourniquets and the addition of condoms to the 3 pack. The needle exchange transaction itself was viewed as efficient, but in some instances hampered by poor dialogue between pharmacist and service user, as well as low return rates. Participants commented on delays in receiving stock which was observed to affect efficiency, type of pack supplied to the user and problems in emptying the sharps bins.

### *Training and information needs*

The most frequent response when staff were asked to identify methods to improve service provision was the provision of more information through training and information about local services and helplines, and refresher courses in response to emergent drug issues and service needs. In particular, training regarding performance and image enhancing drugs including steroids and melanotans was commonly requested. The majority of pharmacies engaged with local community drug services and methadone clinics, but observed the need for greater visibility of services and referral routes.

## **Client-reported outcomes**

### *Client satisfaction with services*

The survey sample (n=74) included 23 females and 46 males, with five clients not reporting their gender, with a mean age of 32 years. The majority (88%) reported using heroin, with less than 15% reporting use of any other drug. Generally the survey sample reported high satisfaction with service provision including pharmacy location, opening hours, staff knowledge, the availability of needs and information provision. A minority of clients reported dissatisfaction with the attitudes of staff (24%) and privacy within the needle exchange (30%) with lower satisfaction on both criteria amongst females. Comments provided included the difficulty clients felt discussing issues around other pharmacy customers with suggestions including separate rooms and entrances to improve their privacy. All six interview participants were satisfied with provision of the service. Experiences of accessing the pharmacies were generally positive with few comments around stigma associated with injecting drug use, or uncomfortable feelings on accessing the pharmacy, with these participants being additionally satisfied with the confidential nature of the exchange. Pharmacy staff were viewed as friendly and polite. Clients' primary reasons to use certain pharmacies were related to location of the pharmacy and staff attitude.

Some gaps in needle and equipment provision were highlighted by staff in the survey sample, including the need for needles suitable for groin injecting. Service users were generally satisfied with the kits provided, with one participant commenting on the need for groin injecting kits. Ten packs were particularly useful over weekends or when travelling. Leaflets in the provided needle exchange packs were described as very useful. Most service users described support and receipt of advice from the pharmacist in relation to wound care, safe injecting and sexual health.

### *Client behavioural outcomes*

Self-reported rates of hepatitis B, C and HIV diagnosis were 7%, 22% and 5% respectively amongst the survey sample. Approximately one third of clients reported never having being tested for each of these blood borne viruses. Approximately half (49%) of the survey sample reporting having ever used a needle that someone else had already injected with, with 28% having done so in the past month. Females were more likely to have shared a needle ever or in the past month than males. Approximately half (47%) of clients reported having multiple partners in the past month, including a small proportion with five or more partners (7%). A minority (39%) of clients reported always using a condom during sexual intercourse.

### **Stakeholder survey**

Six stakeholders completed the survey, including representatives from drug services, the Irish Pharmacy Union and outreach services. Overall, the Programme was rated as being 'very effective' (n=3) or 'somewhat effective' (n=3). Key strengths identified included the increase in availability and accessibility of NEX services, and the impact of this on access to equipment and health professionals. Perceived weaknesses included difficulties encouraging returns, the need for a 'pick and mix' service opposed to premade packs which are not suitable for all clients, a lack of signposting to other services and the identification of some stigma affecting needle exchange relations with local businesses and customers. It was identified that working to reduce stigma and the provision of vaccinations for BBVs in the pharmacy would be key areas to improve the service.

### **Conclusion**

Overall the evidence in this study suggests that the PNEX programme is acceptable and accessible to PWID in Ireland, and largely supported by pharmacy staff. Figures provided by HSE suggest that numbers of clients accessing the needle exchanges increased during 2013, suggesting that the programme is successfully engaging with the injecting drug using population in Ireland and increasing access and coverage of needle exchanges and access to health professionals. Despite these successes, there are a number of approaches that can be taken to improve service provision and further meet client need. It is important that PWID feel comfortable accessing services and are confident in their privacy and that they will be treated with respect. While in most cases the evidence suggests this is already happening, with time and additional training for staff regarding the nature of drug use and client need, engagement between staff and clients is likely to further improve. Additionally, pharmacies need to be better linked in with other health services available to this population and the provision of a range of health interventions and information such as BBV testing, harm reduction, wound care and sexual health advice will further increase the effectiveness of pharmacy needle exchange services.

## Recommendations

1. Provide a wider range of equipment or packs suitable for all clients. Consider the inclusion of needles suitable for injecting steroids and into the groin, condoms and sexual health literature in packs. Additionally, the possibility of providing pick and mix services in addition to pre-prepared packs is likely to better meet client need.
2. Develop integrated care pathways to link the PNEX programme with other services for PWID such as drug agencies and sexual health services. As more health interventions become embedded within the pharmacy, this is likely to become increasingly important to prevent pharmacies from becoming isolated from other related organisations providing services for injecting drug users.
3. Consider offering within-pharmacy testing for BBVs. Where this is not possible, ensure that pharmacy staff have sufficient information on local services to enable efficient referral processes and signposting. Improving the links between pharmacies and other drug-related services will increase referral and uptake of referrals.
4. Increase frequency of training provision for pharmacy staff and include information about anabolic steroids, melanotan and associated PIEDs to help staff provide services to customers who inject these drugs. Training needs to be constantly reviewed to ensure that it is meeting the needs of pharmacy staff. The profile of PWID is likely to change and therefore the knowledge and skill requirements of staff will change too, leading to the need for top up training. For example, this study suggests that use of new psychoactive substances by pharmacy needle exchange clients is low at present, but in the UK use of these drugs is rapidly increasing. If use in Ireland increases then pharmacy staff are likely to require training relating to these substances.
5. Ensure that staff have sufficient training and knowledge about drug use and health related issues to confidently provide harm reduction advice and support in the pharmacy. Explore with staff their training requirements to ensure that packages are useful and review the impact of training to identify whether this leads to improved knowledge and practice.
6. Encourage through training and information for staff a consistent approach to increase returns improved engagement with clients and educating and reinforcing clients on the need to return equipment and the reasons for this. Additionally, build on current work being undertaken regarding appropriate community responses to drug related litter.
7. Oversee the transition from a paper-based monitoring system to an electronic data monitoring system to be used by all pharmacies participating in the needle exchange programme. This will improve efficiency and improve the ongoing care of clients through enabling pharmacy staff to access information about clients, which will help improve client engagement and service delivery.

### *Recommendations for research*

1. Communication between the HSE PNEX Programme, the Irish Pharmacy Union and pharmacy staff regarding the purpose of future research is important. Involving pharmacy staff in the development of the evaluation may be beneficial to increase awareness and acceptance of an evaluation.
2. Future evaluations should use the same measures to allow comparison on outcomes as an indication of programme development. Additionally, to gain a more accurate picture of BBV prevalence that does not rely on self-reported data, it would be useful to explore the possibility of collecting biological samples from clients. For example in England, PWID who participate in the Unlinked Anonymous Monitoring Survey are asked to provide a dried blood spot sample for this purpose, which is anonymously tested for HIV, hepatitis C and hepatitis B.

## **Background**

### **National and regional policies**

The Health Service Executive (HSE) National Service Plan for 2014 sets out the Government's priorities for health services in Ireland (HSE, 2013). Social Inclusion Services in the HSE have the remit for addressing issues related to addiction and HIV/AIDS and key national priorities for 2014 for addiction services are to deliver on the national policy objectives of the *National Drugs Strategy 2009-2016* actions on early intervention, treatment and rehabilitation, to prioritise and implement Health Service actions in the Report of the Steering Group on a *National Substance Misuse Strategy*, and to implement the recommendations of *HSE National Hepatitis C Strategy*. Evaluation of the Pharmacy Needle Exchange (PNEX) Programme falls within the key priorities and actions to deliver in 2014. Regional service plans have been developed for each of four HSE regions (Dublin-Mid Leinster, West, South and Dublin North East) based on the National Service Plan for 2013.

### **Estimates of the number of problem drug users**

It is estimated that there are between 18,136 and 23,576 opioid users resident in Ireland (Kelly et al., 2009). Approximately 11,807 opioid users in Ireland are known to services and are predominantly aged between 25 and 34 years, male, early school leavers and unemployed (Kelly et al., 2009; Carew et al., 2009). Opioid use prevalence among Irish females has increased since 2001 (Kelly et al., 2009). In terms of treatment data, records show an increase in both prevalence and incidence rates among 15 to 64 year olds, with 11,538 cases treated in 2007 (Carew et al., 2009). Figures indicate that the predominant mode of opioid use is inhalation, closely followed by injecting and oral use (Carew et al., 2009). Median ages for first time opioid use are recorded as 19 years, with 20 years for injecting drug use (Carew et al., 2009).

Daily use remains most evident in both existing and new cases for treatment, with almost half of new treatment cases using opioids for longer than five years prior to entry (Carew et al., 2009). In terms of treatment data, records show an increase in both prevalence and incidence rates among 15 to 64 year olds, with 11,538 cases treated in 2007, and with most increases evident outside the greater Dublin area (Carew et al., 2009). Small increases were evident in numbers reporting opioids as primary and secondary problematic drug, with increases most notable in the older drug using population (Carew et al., 2009). Additional problematic drugs used were reportedly cannabis, benzodiazepines and cocaine (Kelly et al., 2009).

### **The Pharmacy Needle Exchange Programme in Ireland**

In 2013, 26,196 needle exchange transactions were recorded by pharmacies participating in the programme. This included approximately 600-1100 unique individuals attending each month, 70% of which were males (mean age 32 years) and 30% females (mean age 30 years). In the vast majority of transactions the client injected opioids. Figures for 2013 suggest that numbers attending the needle exchanges grew throughout the year, from 583 individuals in January to 1,073 individuals in December indicating growing awareness and uptake of the Programme, and suggesting that by increasing the number of needle exchange services, more PWID are able to access them. For needle and syringe programmes to be effective they must reach as many individuals as possible (AIDS Projects Management Group, 2007) and the World Health Organisation state that increasing access to needles and equipment amongst PWID contributes greatly to tackling BBVs (WHO, 2004). The provision of pharmacy based needle exchanges in a variety of rural and urban settings is likely to be a key step towards achieving broad coverage and reducing the risk of HIV and other BBVs in Ireland. In small numbers of transactions only, clients were recorded injecting anabolic steroids, tanning agents and cocaine/ amphetamines. The number of referrals made in 2013 were recorded, including to tier three or tier four services (n=436), blood-borne virus testing (n=402) and hepatitis B vaccinations (n=262). An additional 74 referrals to other unspecified services were reported.

This study was undertaken to evaluate the three year pilot stage of the programme and progress in delivering needle exchange services to PWID, and aimed specifically:

- To understand client and stakeholder satisfaction with needle exchange and attitudes towards and experiences of these services.
- To provide data relating to safer injecting, safer sexual behaviour and the prevalence of blood borne viruses that can be used in comparison to international literature and can be measured against in future evaluations.
- To provide recommendations regarding the development and delivery of services and policy.

# Methodology

## Participants

All pharmacies participating in the PNEX programme in April 2014 were eligible to take part in the study. The research team approached participating pharmacies in April 2014 and asked staff to complete an online survey. Pharmacies were asked to opt in to additional parts of the research including:

- i) Participating in an interview with a member of the research team, and
- ii) Encouraging clients to take part in the research through completion of a questionnaire.

Pharmacies that agreed to opt into the client research were provided with questionnaires, which staff were requested to ask any client using the needle exchange to complete. Completed questionnaires were returned to the pharmacist who returned them to the research team. Telephone interviews were arranged with staff from pharmacies that consented to take part. Non-responding pharmacies were contacted by the research team on a minimum of two further occasions and asked to participate in the study. Additionally the Irish Pharmacy Union and the HSE PNEX Programme contacted pharmacies participating in the programme to inform them of the purpose of the project and their support for it.

The research team approached the ten pharmacies with the most needle exchange transactions in the month prior to the research starting, requesting to visit the pharmacy to conduct interviews with needle exchange clients. These pharmacies were selected due to their higher client numbers, to increase the likelihood of client availability during visits. Visits were made to five pharmacies in total, where needle exchange clients were approached by a member of the research team and asked if they would like to participate in the study through an interview. A €10 voucher was offered as an incentive for clients to complete an interview.

Additionally, it was intended to undertake interviews with key stakeholders associated with the programme, to understand their perspective on service gaps, successes and future developments. During the research process however it was agreed with the HSE PNEX Programme to dedicate resources to recruiting additional clients into the study in place of this stakeholder consultation. As an alternative, a brief online survey was designed to capture views on Programme effectiveness and future development, which was sent to 12 stakeholders identified and approached by the HSE PNEX Programme in May 2015.

## **Data collection tools**

Questionnaires and interview schedules were developed for this study (appendix 1). These included:

- i) An online questionnaire for pharmacy staff, examining their perceptions and experiences of delivering needle exchange including client profile, equipment provision, service provision, service successes, barriers towards service delivery and data monitoring processes.
- ii) A semi structured interview schedule for pharmacy staff to examine in more depth issues covered in the survey.
- iii) A questionnaire for needle exchange clients, examining their drug use, needle-sharing behaviour, needle sources and disposal methods, sexual behaviour, BBV testing history and satisfaction with pharmacy needle exchange services.
- iv) A semi structured interview schedule to examine client experiences with pharmacy needle exchange services in more detail and including their perceptions and experiences of service provision, barriers to successful delivery and improvements to service provision.
- v) An online questionnaire for stakeholders investigating perceptions about Programme effectiveness, strengths and weaknesses and approaches to improve Programme delivery.

## **Data analysis**

Answers to needle exchange client and pharmacist questionnaires were collated and analysed in SPSS. For the majority of questions frequencies and percentages were calculated and, for client surveys, differences by gender were examined using Chi-square tests. Answers to open-ended questions were coded and grouped by theme. Interview data from pharmacy staff and client interviews were supplemented by field notes and reflections made by the research team. Data were transcribed and emerging themes identified and analysed. Responses to the stakeholder survey were collated and summarised.

## Results

Of the 107 eligible pharmacies, a total of 70 participated in the study. Reasons why the 37 pharmacies did not take part included: refused to take part (n=4), needle exchange service was not yet operational or had ceased to operate (n=12) and that the needle exchange was operating but no clients had attended the service at the time of the research (n=21). Of the 70 participating pharmacies, staff at 30 pharmacies agreed to an interview and staff in 28 pharmacies agreed to administer the client questionnaire. Eight pharmacies returned completed client questionnaires to the research team and clients at an additional five pharmacies completed surveys during the site visits. During visits, six clients consented to take part in an interview.

The numbers of participants who took part in the different strands of the study are summarised in table 1. Findings are presented here in four sections:

- A. Pharmacy staff: analysis of questionnaire data
- B. Pharmacy staff: analysis of interview data
- C. Clients: analysis of questionnaire data
- D. Clients: analysis of interview data

In both pharmacy staff and client questionnaires, participants had the opportunity to provide more detailed responses to open-ended questions. Findings are summarised in the text here, but full lists of responses are provided in the appendix to this report.

**Table 1 Breakdown of participants**

Data collection method	Number of participants
Interviews with pharmacy staff	30
Online questionnaire for pharmacy staff	69
Interviews with pharmacy clients who inject drugs	6
Questionnaire for pharmacy clients who inject drugs	74

### A. Pharmacy Staff: Analysis of survey data

#### Experiences of needle exchange provision

##### *Service successes*

Pharmacy staff were asked to describe any benefits or successes of service provision, with 49 (71%) providing a response. A range of positive outcomes related to needle exchange provision were identified including benefits for PWID (n=32), staff (n=10), and the general public (n=8). Clients were perceived to have benefited through increased access to clean needles, harm reduction advice and health professionals and through increased likelihood of referral into treatment. Staff benefits included increases in development as a pharmacist, variety in work and enhanced job satisfaction through helping clients into recovery. The wider community were perceived to benefit through reduced needle disposal in public places and reduced transmission of disease. Responses regarding the successes of the service are provided in appendix E1 (all appendices are available on request from the HSE).



### *Client engagement*

Participants were asked to describe how effective they believed the service was at engaging with clients (Table 2). While the majority of staff reported that they perceived the pharmacy needle exchange as being very or somewhat effective at engaging with clients (72%), small numbers of participants described difficulties that they had developing relationships with clients. In particular, it was identified that clients, particularly when they are new to the service, may not be interested in engaging with staff (n=4) and that clients can be aggressive, impatient and difficult to manage (n=3). Some staff also perceived that some needle exchange clients may be uncomfortable using the service or approaching staff in front of other pharmacy customers (n=3). Responses regarding the relationship between staff and clients are provided in appendix E2.

**Table 2 Staff perceptions regarding client engagement with the service**

<b>Staff survey: How effective do you rate the service at engaging with clients? (n=69)</b>	<b>n</b>	<b>%</b>
Very effective	12	17
Somewhat effective	38	55
Neither effective nor ineffective	9	13
Somewhat ineffective	7	10
Not effective	0	0
Did not answer	3	4

### *Pharmacy suitability as a setting for needle exchange*

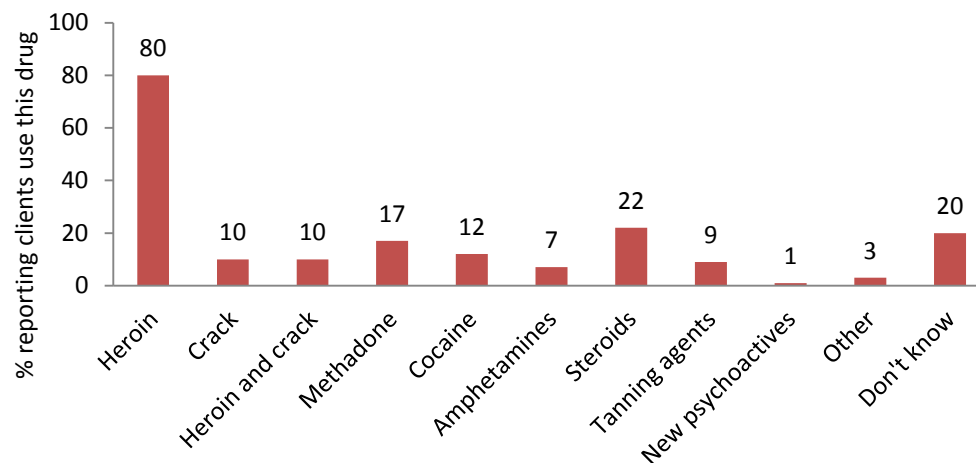
Staff were asked to identify any difficulties that they had experienced providing needle exchange in the pharmacy. Approximately one third (30%) of participants identified issues relating to the suitability of the pharmacy for needle exchange provision. This included staff perceptions that needle exchange clients increase the risk of crime, shoplifting or undesirable behaviour in the pharmacy (n=7), or can have a negative impact on other pharmacy or shopping centre customers (n=7) and the negative attitudes from local businessmen, shopping centre security and the general public towards the service (n=7). When asked to identify approaches to improve service provision a small number (n=4) suggested improving privacy in the pharmacy through using separate doors and waiting rooms for needle exchange clients. All responses regarding the pharmacy setting are provided in appendix E3.

## **The needle exchange transaction**

### *Client drug use*

Staff were asked to describe the drugs used by their needle exchange clients. The proportion of participants reporting that clients used different drugs are displayed in figure 1.

**Figure 1 Drugs used by clients, reported by pharmacy staff (N=69)**



### *On site interventions and specialist services*

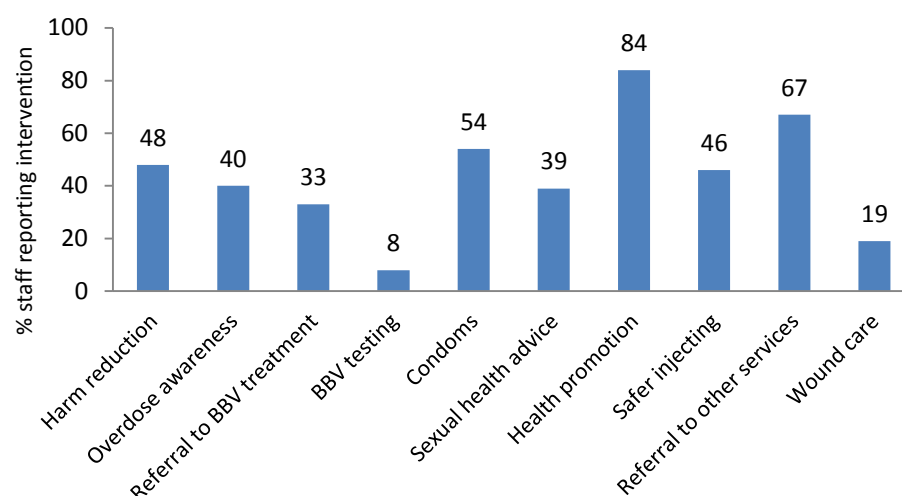
The nature of service provision was examined through questions regarding interventions and services offered in the pharmacy. The proportion of pharmacy staff who reported a) the onsite provision of interventions and services for clients and b) the onsite provision of or signposting to services for specialist or outreach groups are displayed in figures 2 and 3 respectively.

### *Needle and equipment provision*

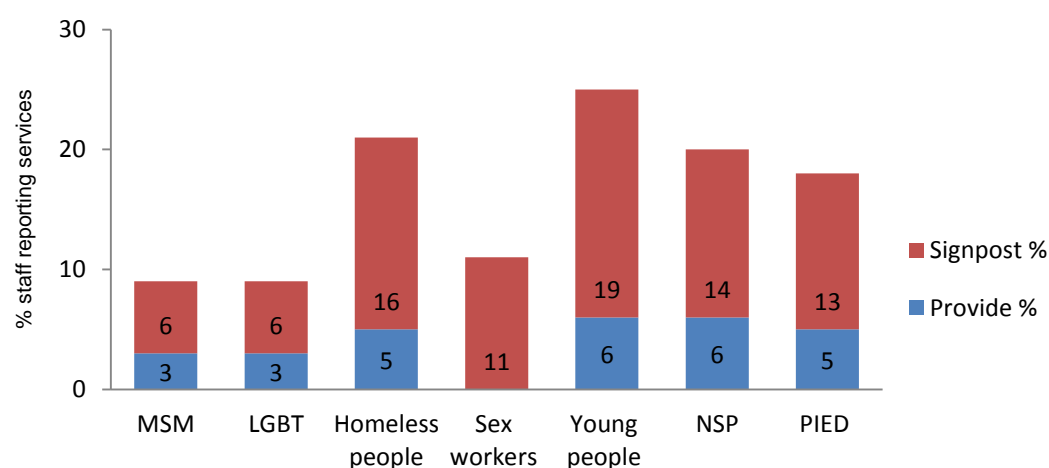
Staff described any limits or restrictions that the pharmacy enforced regarding the number of needles that could be provided in one transaction. Restrictions were reported by 26% of staff and included the provision of one pack per transaction (10%), two packs per transaction (12%) and unspecific limits on the amount of packs provided to clients who were requesting larger numbers of needles (9%).

Staff were asked whether there is any additional equipment that they would find it useful to provide in the needle exchange. In total, 38% participants identified equipment they believed is needed including needles for intramuscular injection of anabolic steroids (13%) and groin injection (12%), steroid specific packs (10%) and tourniquets (7%). Other equipment including citric, water, condoms and alcohol wipes were identified by smaller numbers of participants. All responses regarding limits on equipment and additional equipment requirements are provided in appendix E4.

**Figure 2 Services provided on-site, as reported by pharmacy staff (N=69)**



**Figure 3 Specialist or outreach services provided on-site or signposted to, as reported by pharmacy staff (N=69)**



### Returns

When asked to identify barriers to successful delivery of needle exchange, a small number of participants (n=9) described difficulties with clients not returning used needles to the needle exchange. Participants were asked to identify approaches to increase returns of used needles. Of 26 participants to make suggestions, the majority (n=17) supported the provision of new needles only to clients who returned used needles although a small number of these participants stated that this was an impractical solution. Other suggestions made included regularly reminding and working closely with clients to encourage returns (n=12), including educational literature in needle packs (n=5), providing incentives for returns (n=2) and increasing privacy for clients making returns (n=2). Responses regarding returns and strategies to improve return rates are provided in appendix E5.

## Improving service provision

### *Training and information provision*

The most frequent response when staff were asked to identify methods to improve service provision was the provision of more information through training (n=21) and information about local services and helplines (n=4). In particular, training regarding performance and image enhancing drugs including steroids and melanotans was commonly requested (n=10). Individual responses are provided in appendix E6.

### *Data monitoring procedures*

The majority of staff reported that they find the current data monitoring form to be 'very' or 'somewhat' effective (71%) and only a small proportion found the form ineffective (table 3). Participants were asked to identify any difficulties they had experienced with data monitoring and common responses including clients providing false information (n=8), the form not including housing status (n=5) and the time spent asking returning clients the same questions at each transaction (n=5). When clients provided false names that changed from one transaction to another this was noted as having an impact upon the effectiveness of data monitoring. When asked to identify methods to improve data monitoring, common responses included moving from a paper to online monitoring form (n=10), reducing the number of questions asked (n=6), asking clients about their housing status (n=5) and treatment status (n=4). All responses regarding data monitoring are provided in appendix E7.

**Table 3: Staff (N=69) perceptions about the effectiveness of the data monitoring form**

)	n	%
Very effective	16	23
Somewhat effective	33	48
Neither effective nor ineffective	10	15
Somewhat ineffective	5	7
Not effective	1	1
Did not answer	4	6

## B. Pharmacy Staff: Analysis of interview data

### Operation of the Needle Exchange

In general the needle exchange service was observed by pharmacy staff to be working well in their pharmacy and creating useful points of regular and transient contact with injecting drug users. The service was described as quick and efficient with minimal impact on the running of other pharmacy activities.

*'We are a really busy pharmacy and I did worry about if they have to wait when they come in and would that be a problem, but it's actually been really really well. And they've been really excellent all the service users. Like I couldn't say anything bad about any of them, it's been really fantastic. I think it's been going a lot better than expected and we have had a lot more exchanges than expected as well.'* Staff Participant Number Eleven

*'I think it's working very well overall and the clients seem very happy with it and overall we would very rarely have any problems with them, they'd be very patient and grateful. There'd be the odd one who would be that way, but then they come and go you know. They wouldn't be our regulars should I say, they usually passing through.'* Staff Participant Number Twenty Three

This point of contact in providing clean injecting equipment was deemed important in promoting safe injecting practices as well as the dissemination of harm reduction and health related information, and provision of medical support and treatment referral from the community pharmacy. One participant observed;

*'I think the opportunity I suppose to have engagement with people that might not otherwise get opportunities to engage with healthcare professionals, it's satisfying. Yeah that sort of interaction with them when you try to engage with them to see if there's anything you can do, like we have had some people who possibly have gone down [to the] treatment room from it.'* Staff Participant Number Seventeen

*'I would have spoken to some of the clients, some of them who would maybe have had an abscess from the groin injuries where you can advise them "you need to get that seen to or it'll only get worse", other times you can ask them more questions "did you get your bloods checked for the usual". I don't like to be specific in all the conditions you know. They do know what they are at risk from. A lot of them do go for regular checks, a lot do go to hospitals. I ask them where do they get them done and they say the hospital, right ok. It's like making you aware that they are there, for you to access them. You would see, you could*

*maybe ask them “have you thought about getting on a detox program, there’s clinics you can go to, there’s different types, it’s not just one way of coming off this, you know there’s different ways you can do it”.*’ Staff Participant Number Three

Main street and city centre pharmacies were viewed to be better locations for providing needle exchange services, due to lack of transport for many service users. Some pharmacy needle exchanges also provided methadone. In terms of operation of the needle exchange in the pharmacy, considerations included the need for pharmacy staff to be vaccinated against Hepatitis B, and the regular collecting of bins containing used needles was described as important. Half of participants commented on delays in receiving stock which was observed to affect efficiency, type of pack supplied to the user and problems in emptying the sharps bins.

### **Service User Awareness and Uptake**

Staff described service user profiles as ranging from young drug users to older, long-term injecting drug users. Age was viewed as difficult to determine at times, but most dates of birth supplied placed service users between mid-teens to mid-forties in age. Some service users were described as engaging on behalf of others. Male service users were perceived as more common than female. Poly substance use and use of temporary housing were both seen as common. Some service users were described as not accessing other services, with a minority waiting to access treatment. Relapse instances were described as common amongst those receiving treatment.

Uptake was viewed as sporadic in some sites, with comments around levels of heroin availability impacting on injecting rates. Half of participants commented on the need to increase service user uptake. One participant observed;

*‘It’s ok it’s just that we don’t have an awful lot of clients, we’ve tried to address that but obviously you can’t make people come to a place or location if they don’t want to.’* Staff Participant Number Twenty Four

Increasing uptake was reported in some sites, but with no change in gender profiles. Recent changes in client profile included increasing presentation of younger users, and members of the Traveller Community requesting needles for the injecting of melanotan, a synthetic tanning peptide. A rise in uptake from eastern European groups was observed by some pharmacy sites.

Word of mouth, for the most part, was viewed as most likely to alert injecting drug users to provision of the service, with several comments made by participants around the lack of familiarity of users with the needle exchange logo. Access and continued uptake was perceived to be facilitated by speedy transactions, provision of private entry in some sites, and exchanges occurring in private consultation rooms.

Pharmacy experiences with service users were generally very positive. The majority of service users accessed the needle exchange alone. For the most part, service users were viewed to be polite, mannerly and abiding by the rules of the shop. This was viewed by participants to be grounded in verbal instruction and ground rules for acceptable behaviour provided by the pharmacist.

*'Overall they're usually quite friendly and appreciative. Sometime they're a bit agitated or in a rush, you know you can understand that, or if they're having a bad week or whatever, but like I say we've only had one or two problems.'* Staff Participant Number Twenty Three

*'We have had no problems with any of the users of the needle exchange, you know the way they might be anti-social or that. For the most part they are very well behaved, they're polite, the return users get to know your name.'* Staff Participant Number Two.

Some minor incidents of visible intoxication and shoplifting were reported. However, these were dealt with successfully by the pharmacist and with minimal impact on the needle exchange, and general running of the pharmacy.

*'I find them grand, they're usually ok. They're just normal people to me you know. They haven't asked to be the way they are. They're grand, they're getting the service for free so I think they're happy with that, they're not gonna cause any trouble. The odd one you'd have would try to rob but you just escort them out the shop, you kinda know them from coming in, but yeah they're grand other than that.'* Staff Participant Number Seven

No complaints were evident with regard to public nuisance and antisocial behaviour occurring outside of the pharmacy needle exchange. Some comments were made around public and local business complaints of drug related littering, specifically used needles and remains of the provided needle exchange pack with several needles remaining unused inside, and with low return of used needles. One participant commented;

*'We try and address that and inform some of the needle exchange users because some of them can be good communicators with the rest of the people using. So we kind of say; "there's needles being left around can you spread the message".'* Staff Participant Number Two.

## **The Needle Exchange Transaction**

The needle exchange transaction itself was viewed as efficient, but in some instances hampered by poor dialogue between pharmacist and service user, and low return rates. Some participants reported never receiving used packs in return for new equipment and underscored the need to advise service users on the safe disposal of used needles and equipment. Returns in some pharmacies were described as increasing over time. The more middle class user was deemed to be more responsible in returning used packs.

*'It's a prompt service, the very minute they come it's there, they are dealt with. I go through the pack with all the new customers that come in and I ask them do they have any empties so I think the service is fine, you know I'm not judgemental to them I just wish they'd bring back the packs, like they're getting it for free you know.'* Staff Participant Number Five

Some comments were made that the needle exchange service transactions could be improved in terms of engaging with the user. The exchange itself was described by the majority as a quick process, with service users appearing anxious to leave the site. Lack of interaction was generally due to service user reluctance to engage, and pharmacist lack of time. Some participants described service user impatience in waiting their turn, and attributed this to opioid craving and stigma relating to opioid dependence and injecting drug use.

*'Anybody who comes in wants to get out as quick as possible, you know they don't want to be hanging about they don't want anybody to see them, so fine. Now we haven't had really much hassle with anybody, everyone is fine.'* Staff Participant Number Four

*'We do have a '1 in' policy. So that you're not having a string of them coming in at once where it's too overpowering. They get their stuff and they don't loiter, they just come in get their stuff and away.'* Staff Participant Number Three

Confidentiality and discretion was viewed as important in ensuring continued uptake. Private consultation rooms in some instances were equipped with yellow bins for safe disposal of needles, and which was viewed by the participant as useful in promoting a confidential service. Use of these rooms was also viewed as important in relationship building and pharmacist assistance in dealing with service user health related queries. One participant observed;

*'My problem is I don't want to broadcast that it is needle exchange in front of other customers, so you try be discreet about it, so it can be difficult. Other times its fine.'* Staff Participant Number Fifteen.

Communication between pharmacy staff was viewed as important in monitoring the service itself and the experience of the frontline staff. One participant observed;

*'The girls [staff] are happy with the service. I do keep a check with them ask like "have you any problems, is there anything more I can do, is there anything more we need to provide for our clients or any incidences where you have had an incident with a client".'* (Staff Participant Number Three)

Service user information was recorded as per the protocols of the needle exchange service. Some participants observed that they were unsure whether the exchange was for the actual service user, when attempting to access needle exchange without 'empties', and comments were made around confirmation of identity and frequent supply of false names. Improvements in data capture and submission was viewed by one participant as warranting a specific electronic system.

*'I say to them all the time but like we never get any empties back here, never ever. But they do give me the information, their names and date of births but sure they could be anyone'.* Staff Participant Number Five

*'I like the information that we gather off of the users like we take the time to question them, like, do they have any comments? Are they on any programme? Are they up to date with their blood tests & vaccinations? I think that's very well*



*laid out because you get good information back from them and I think as well you get a good relationship with them as well, that they realise someone is checking up on them, even if they're not on a program somewhere.'* Staff Participant Number Twenty One

## **Needle Exchange Packs**

Many positive comments were made around the contents of the provided safe injecting kits.

*'I think the kits are very well laid out very safe and like the info that comes with them.'* Staff Participant Number Twenty One

Pack size options were described by the majority of participants as optimising efficiency and discretion for the user, and that service users generally chose to take the 3 pack. Some comments were made around encouraging use of 10 packs, in order to reduce sharing activity. Others disagreed for wastage reasons. Some comments were made around provision of single packs. One participant observed;

*'It moves in trends like you now the 3 pack could be popular for 2 or 3 months and then they'll go back to the 10 pack it'll be popular for a little while, they seem to move it around a bit.'* Staff Participant Number Nineteen

*'Like sometimes you might get them to take 10 packs say the bank holiday weekends and stuff but a lot of times they prefer the 3 packs, I think its size, portability and the lads like to stick it in their pocket rather than carry it in the pharmacy bag they think people know what's in the bag so they will wear a jacket with pockets you know, or they might stash it in a bag with their shopping you know, but they're very self-conscious or aware that other people might know what it is, so I think that's it.'* Staff Participant Number Twenty Three

Many participants observed that service users report that needles and syringes provided are not the right size or right volume, with many describing them as too small. Some service users were described as purchasing diabetic needles. Some requests for longer needles for groin injecting were described. One participant observed;

*'Well the kits are inflexible and we do get requests for alternatives in terms of needles and we only have a very inflexible set that we can give out. I think we are pharmacists after all we can dispense things up. So that would be something that could be better – more flexibility. Different needles, Different amounts of syringes I think.'* Staff Participant Number Nine

*'Sometimes they'll say to me they want a bigger syringe, they'll ask me for a 1ml or 2ml syringe I forget what size the syringes are in that, I think they're a 1ml.'* Staff Participant Number Twenty Three

Some participants observed the need for packs to provide more alcohol wipes, citric and alternative types of needles. Tourniquets are also viewed as warranting inclusion in the pack. Three packs do not contain condoms, and this was queried by some service users. Most pharmacies reported providing the water separately, which was also viewed by some as warranting inclusion in the pack.

*'Some people ask for extra citric with the smaller packs and we don't have the citric on their own, they are all packed individually with the needles. Some people look for individual needles. We try and discourage that because we want them to take the box with them so they have something to put them into.'* Staff Participant Number Two

Other comments centred on advising service users to use the small black kit in the 3 pack for disposal and storage of used needles. Service users in some instances aren't aware that this can be used to store used needles. Having the sharps bin as separate to the provided needles was viewed as safer by some participants.

Some observed the need to keep packs in stock, given the nature of the clientele. One participant commented;

*'I do find as well if you are short, I can't let my stocks run low. I think coming up one time last Christmas I did. I went a wee bit low and I was like on the phone to [the team who supply the kit] saying "I need them here, they're gonna drag me across the counter, haha". It learnt me a valuable lesson and the girls. We didn't think. Oh sure they'll come back tomorrow is not an option, they want it, you must keep your stocks at a safe level.'* Staff Participant Number Three

## **Relationships and Trust**

The development of a relationship based on 'respect, empathy and harm reduction' between exchange participants was viewed as important in increasing uptake in the needle exchange, and reducing unsafe injecting practices.

*"We would have quite a few clients who come in. We have built up a relationship with our clients to provide them with clean needles. We did find on speaking to them that they were reusing needles. By introducing this service into our pharmacy it has alleviated that problem. Initially when we did start out we were the only ones in town using the service and a lot of them were very grateful that we did provide the service.'* Staff Participant Number Three

*'I think that it's a small enough town so we kind of know them from coming in and we get to know them, you know what they want, we get to know their names, not that we ask but sometimes you just kind of get to know, so they kind of like that that they are treated as they should be treated really.'* Staff Participant Number Six

First contact characterised by friendliness on the part of the pharmacist and frontline staff was viewed by many as vital in creating the initial steps of a relationship. Other comments centred on providing support in a friendly and non-judgemental atmosphere. Comments included;

*'I do think that we do establish contact with them. I think it's very important that first contact, that it's not too aggressive and gets them to back off, that its open and friendly, and I think we do that well.'* Staff Participant Number Two

*I am happy with how the staff deal with the service users. We have a lot of methadone patients and I would be really really aware of how some of them had complained in the past that in other pharmacies they were in and they didn't feel they were treated very well. So we make a really active and conscious effort to just treat them like every other customer and to treat them really well and to be genuinely concerned for them and like because they had all gotten to know all the staff and staff were really knew them all, we did really well with them, I thought hopefully we can do the same with the needle exchange users.'* Staff Participant Number Eleven.

The needle exchange service was deemed by the majority of interviewees as lacking in service user to staff interaction; with many comments describing how service users appreciated the lack of interaction and the consequent speed of the process. This however was also observed to reduce the opportunity to engage in dialogue around injecting behaviours, peripheral health needs, concerns and requests for help.

*'It's a very neutral transaction really. Most of them I think appreciate that. And on the converse side of it, we have had some who are very pleased with the service, they bring their returns, collect fresh supplies and to me that's the very nature of the system when it's called a needle exchange. That's the way I feel things should be run.'* Staff Participant Number Ten

*'I try to expedite it and I suppose, maybe in one sense it could be an undercurrent, you don't want them hanging around, if they come in for anything like that because they have a tendency to steal, you tend to deal with them maybe quicker than you might want to ordinarily, in other words I might serve them over somebody else. But it can be done pretty quickly, in other words, sometimes a raised eyebrow will tell me what they want, so I can get ahead and give it to them.'* Staff Participant Number Eighteen

Trust was viewed by participants as important in continued uptake of the service and was viewed as setting the foundation for volunteering of information from service users over time. Staff, in all cases, were very positive about providing the service in an efficient and discreet manner. Comments included;

*'I think they can talk to the pharmacists and they trust them well, they kind of know them at this stage, they kinda be comfortable coming in and they wouldn't be embarrassed or anything and they know that there's help there.'* Staff Participant Number 13

*'We try and give the service quite speedily, they don't want to wait and we don't want to stress them out either, so we would be efficient in that way. We'd be discreet with the whole thing. We don't give them much hassle at all, we try and ask for returns but we're very mannerly about it, and just try and stress that it is important that they bring back their returns. Some are very good and some are actually very good when we speak to them and take the time to speak to them. Its finding the time at times to speak to them.'* Staff Participant Number Fifteen

## Health Advice and Referrals

Health advice, sexual health and wound care (advice and dressings) was offered in most sites, with at the minimum, advice leaflets in the provided packs given. General advice also centred on wetting the filter prior to injecting. The development of a series of health related questions and training on providing advice was viewed by some as warranted. Other needs include local referral information and provision of leafleting on hepatitis vaccination in the pharmacy. Comments included;

*'If they have obvious wounds on their hands we would assess them as they come in and say, oh look you need to go to see a doctor with that, that needs to be looked at, that's infected – things like that. Like when you have established that rapport they will ask you "I've got this cut here and it's not healing". They'll ask for dressings, things like that, then you can establish conversations, "how long have you had it, is it getting worse, is the redness spreading". So things like wound care you do touch on quite a bit. Not so much other issues.'* Staff Participant Number Two

*'I would be very up front, and I'd be very, every time they come in I don't let them away with just coming in and getting them and leaving, I do try and get them to talk about their health or lack of, you know. Personal care also. And I would be very up front and say "have you thought about vaccinations, have you thought about does your GP know you have this addiction", stuff like that. Sometimes they'll tell me and sometimes they'll sit down and tell me their whole life story.'* Staff Participant Number Twenty Seven

The majority of pharmacies engaged with local community drug services and methadone clinics, but observed the need for greater visibility of services and referral routes. Some were aware of local treatment and detoxification services and referred service users to these when requested. Waiting times at these services were viewed as detrimental to service user treatment decision-making. Comments included;

*'We have the numbers for [the coordinating agency] and we give them the direct line number to get in contact with the nurse there because they'll do blood tests there and everything so if they want us to do the referral for them we can but quite often they'll ask you for the number or they'll say "I'll do that" and they might put it off, or they mightn't depending on how they are feeling or how things are going for them or what stresses are in their life. Not Often. Not often enough I would think. When they are ready to do the referral and then they do it and then they realise there's a 3 month waiting list to get on the program, they tend to get very impatient and why isn't it available, because when they are ready they are ready. They are ready to do it right now, whereas 3 months down the road they are already sliding back and when they are ready they are trying to reduce the amount of heroin they are taking so they tend to go into withdrawals, so they get into a vicious cycle. So the referrals not often enough, maybe once a month.'* Staff Participant Number Five

*'All we can do is recommend people to seek help and point them in directions. But we've no means of tracking whether they present or (not). We tend to see the same people the whole time, you know we might get a new person every so often and people disappear. But you know, so you don't wanna be, like a lot of them are all on methadone programs that we know all about, so there's no point in me going out repeating myself every time I meet them coz they don't want to hear it. Like they don't want me referring to the HSE if I know they're actually attending the HSE.'* Staff Participant Number Twenty

## **Training Needs and Support**

The majority of participants were satisfied with the needle exchange training provided. For the most part, continued training is needed on specific health related questioning and on where to refer service users in terms of health, medical and treatment services. One participant observed;

*'I think it's very good service, I really support it. I think certain things we can improve, mainly, what I think I'd like is a bit more information about if they want to come off, the drug using and the needles and stuff like that. But I do think it's a really good service, but there is room to improve.'* Staff Participant Number Twenty Two.

Some comments were made around the need for regular refresher courses in response to service needs and emergent trends in injecting drug use.

*'I definitely want training and I know the staff want training on how to encourage people to choose the different, go on methadone or tell them what's available, tell them what's out there, tell them the services, because there doesn't seem to be a lot of services.'* Staff Participant Number Fifteen

Some participants described needing more information and specific training on the injecting needs for steroid and melanotan injecting.

*'Some people are using them for tan or steroids or something like that. Now I wouldn't be familiar with anything like that so I wouldn't know what to advise or how to advise, like they are quite small needles for like especially the steroids, I dunno are they intramuscular or whatever. So that I wouldn't know much about that part of it. Injecting the tan I know nothing about that it just sounds really weird'. Staff Participant Number Two*

Others commented on the need to have training and protocols in place for the use of false names and instances when the service user is intoxicated or aggressive during the transaction.

*'Well maybe more training on if they come into me and say "my name is Jack Rabbit", I'm supposed to put down JR is it? It's a bit, like is there anything else I'm supposed to ask them apart from any empties and also like referrals. Where do you refer them to? I don't wanna be asking them really personal questions either you know. A broach on the subject. Like some of them come in here and they do be off their head and you don't know if they'll remember the conversation or where they were or what they got you know'. Staff Participant Number Five*

## C. Clients: Analysis of survey data

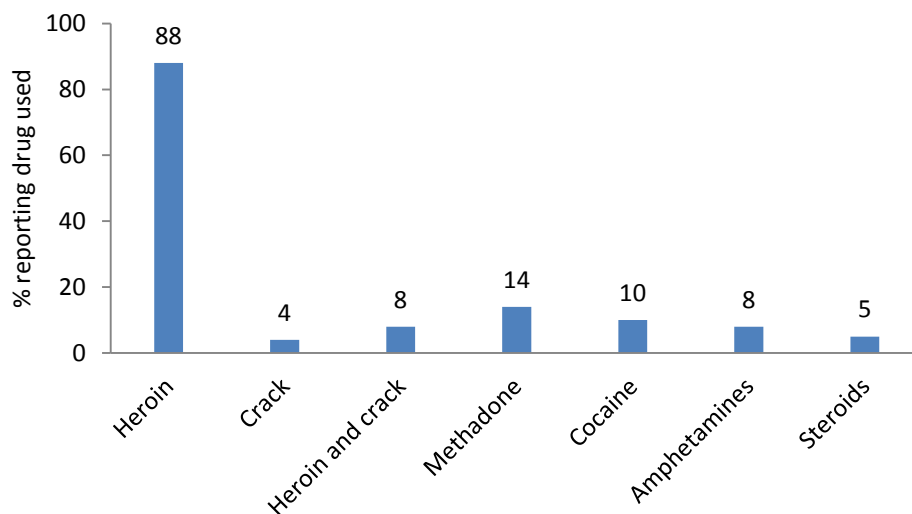
### Profile

In total, 82 needle exchange clients completed questionnaires. In eight cases, questionnaires were largely incomplete and these participants were therefore excluded from the study leaving a sample of 74 clients. The sample included 23 females and 46 males, with five clients not reporting their gender. Age ranged from 19-52 years (n=12 clients did not provide their age) and the mean age was 32 years. Drug use reported by participants is detailed in figure 4.

### Satisfaction with pharmacy needle exchange

Participants were asked to describe their level of satisfaction from one (very satisfied) to five (very dissatisfied) regarding key aspects of pharmacy needle exchange provision (Table 4). The majority of clients reported satisfaction with service location and opening hours and with staff knowledge, the availability of needles and information provision. Despite very high levels of satisfaction with opening hours, eight clients commented that longer opening hours or information regarding alternative places to access needles during out of hours would be beneficial. Introducing Sunday provision was also identified as potentially useful by four clients.

Figure 4 Drugs used reported by clients (N=74, multiple drugs were reported by some respondents)

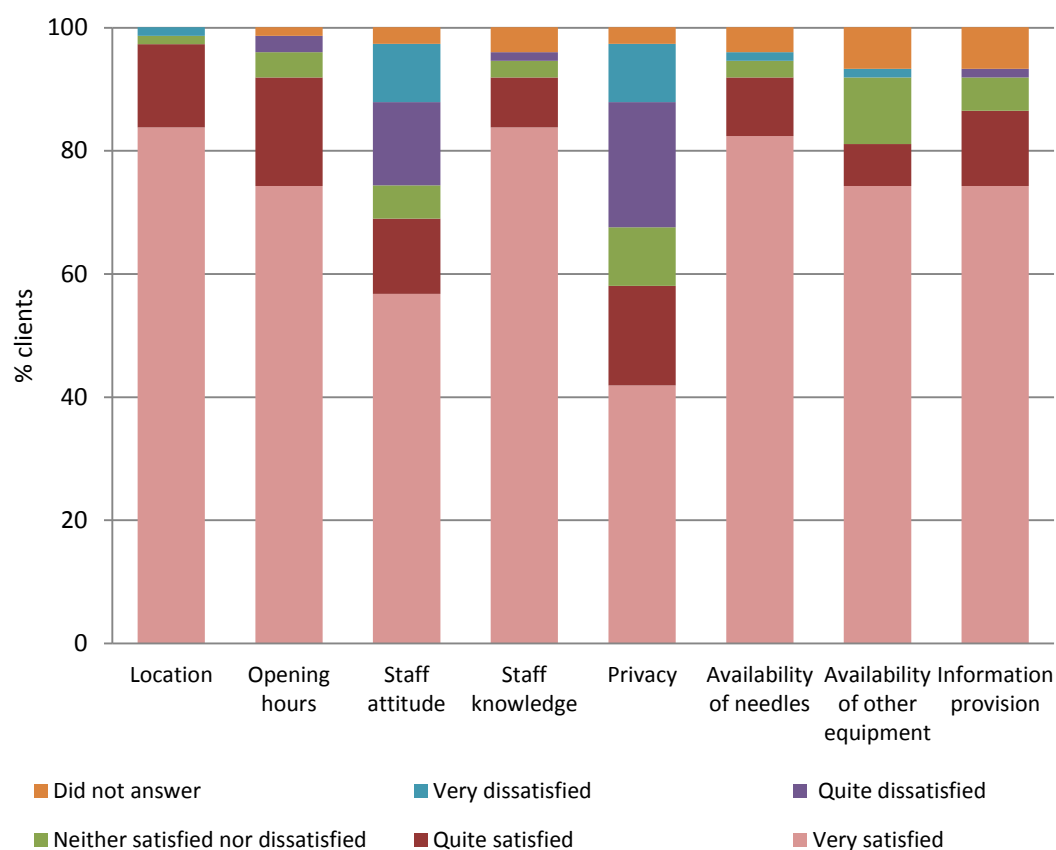


A minority of clients reported dissatisfaction with the attitudes of staff (24%) and privacy within the needle exchange (30%). For perceptions regarding both staff attitude and privacy, there were differences between responses by males and females. Mann-Whitney tests indicated that females (N=23, median=2) were significantly less likely than males (N=46, median=5) to be satisfied with staff attitudes ( $U=202.5$ ,  $p=0.00$ ), and that females (N=23, median=2) were also significantly less likely than males (N=46, median=5) to be satisfied with privacy in the pharmacy ( $U=260.0$ ,  $p=0.00$ ).

There were no differences between males and females on other measures. When asked to recommend any changes or improvements that would improve the service, nine clients made comments regarding their privacy. Comments focussed on the difficulty they felt discussing issues relating to the needle exchange around other pharmacy customers with suggestions including separate rooms and entrances to improve their privacy. All comments relating to privacy and discretion, opening hours and availability, and experiences with staff are detailed in appendices F1-F3.

**Table 4 and Figure 5 Client (N=74) satisfaction ratings with pharmacy needle exchange factors**

	5 (Very satisfied)	4 (Quite satisfied)	3 (Neither satisfied nor dissatisfied)	2 (Quite dissatisfied)	1 (Very dissatisfied)	Did not answer
	%	%	%	%	%	%
Location	84	14	1	0	1	0
Opening hours	74	18	4	3	0	1
Staff attitude	57	12	5	14	10	3
Staff knowledge	84	8	2	1	0	4
Privacy	42	16	10	20	10	3
Availability of needles	82	10	3	0	1	4
Availability of other equipment	74	7	11	0	1	7
Information provision	74	12	5	1	0	7



## Needles and equipment

The majority of clients were satisfied with the availability of needles (92%, table 4) and reported that they find it easy to obtain needles (81%). Some gaps in provision were highlighted when clients were asked for suggestions regarding changes or improvement to the service, including desire for needles suitable for injecting into the groin (n=4), better quality needles (n=2) and varied needle packs (n=2). All client comments relating to the provision of needles and equipment are detailed in appendix F4.

Clients detailed the places and methods utilised for disposal of used needles (table 5).

**Table 5 Client disposal of used needles (some respondents reported multiple approaches to disposal)**

Setting/ method of disposal	Pharmacy	Drug services	Waste bins	Burning	Left in public places
Clients %	72	38	14	23	0



## BBV testing and diagnosis rates

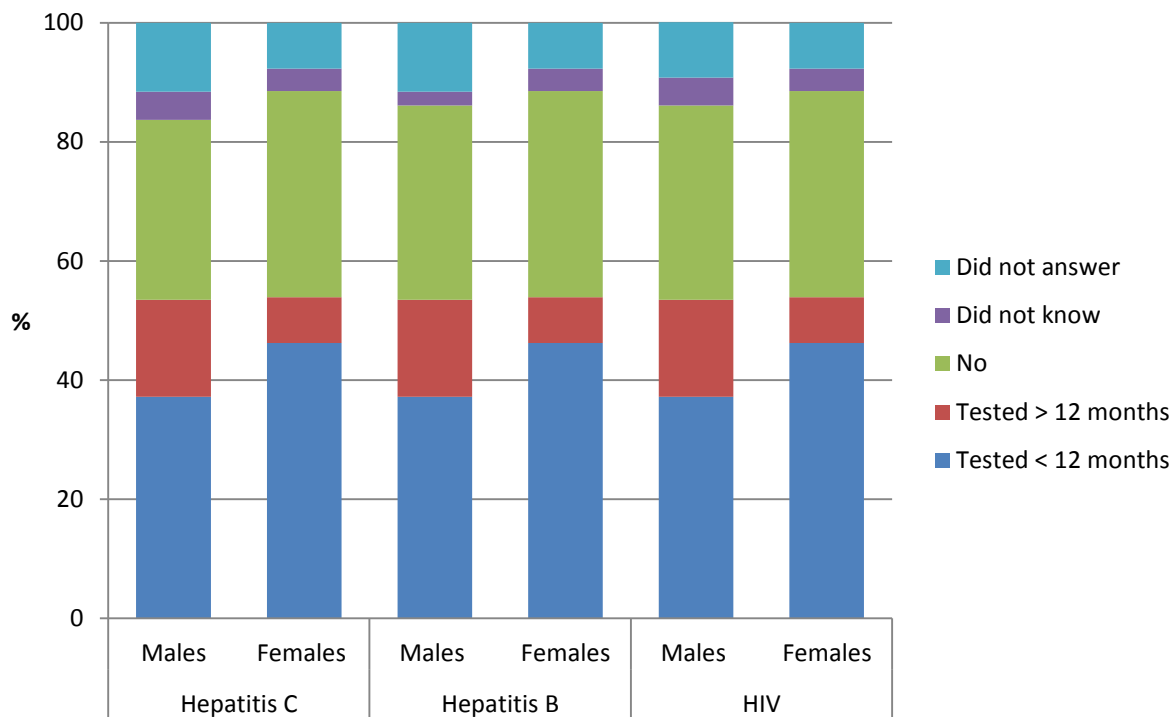
Clients provided details of their testing and diagnosis status regarding hepatitis B, hepatitis C and HIV (table 6, figures 6 & 7).

**Table 6 Client reported rates of testing and diagnosis for hepatitis B and C and HIV**

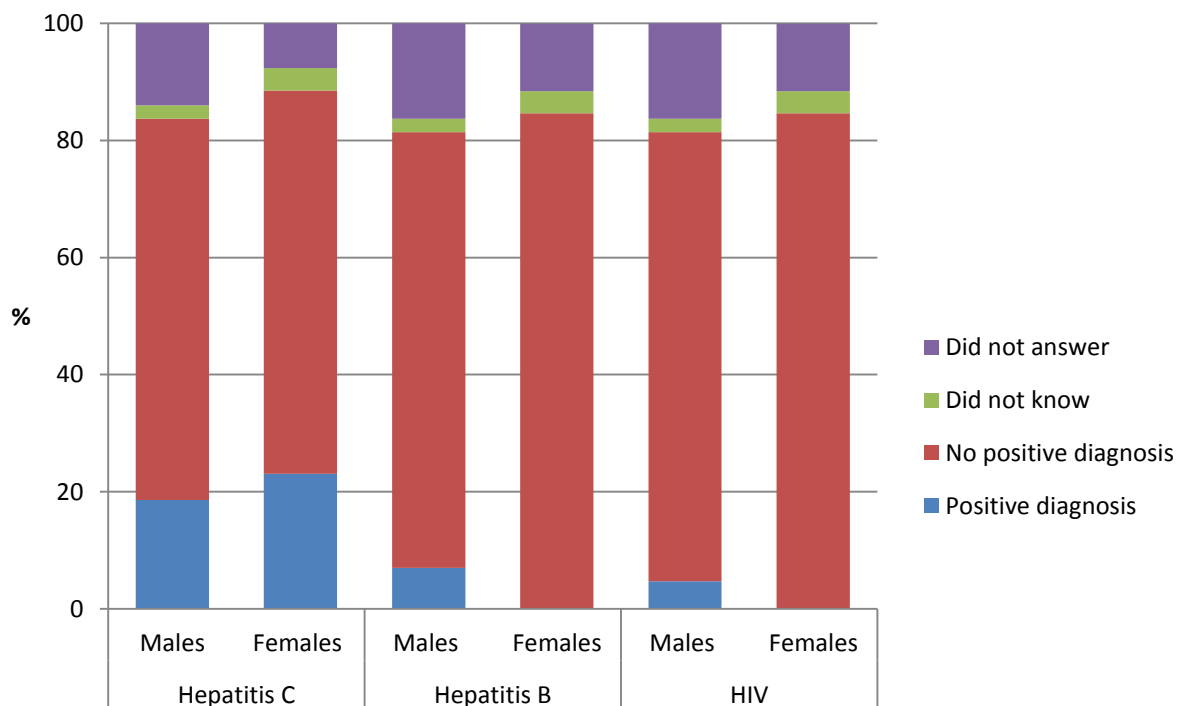
		Total (n=74) <sup>1</sup> n (%)	Males (n=43) %	Females (n=26) %
Tested for hepatitis C	Within past 12 months	31 (42)	16 (37)	12 (46)
	Before past 12 months	9 (12)	7 (16)	2 (8)
	Never	24 (32)	13 (30)	9 (35)
	Don't know	3 (4)	2 (5)	1 (4)
	Did not answer	7 (10)	5 (12)	2 (8)
Tested for hepatitis B	Within past 12 months	31 (42)	16 (37)	12 (46)
	Before past 12 months	10 (14)	7 (16)	2 (8)
	Never	24 (32)	14 (33)	9 (35)
	Don't know	2 (3)	1 (2)	1 (4)
	Did not answer	7 (10)	5 (12)	2 (8)
Tested for HIV	Within past 12 months	30 (41)	16 (37)	12 (46)
	Before past 12 months	9 (12)	7 (16)	2 (8)
	Never	25 (34)	14 (33)	9 (35)
	Don't know	3 (4)	2 (5)	1 (4)
	Did not answer	7 (10)	4 (9)	2 (8)
Hepatitis B vaccination	Yes	62 (84)	38 (88)	20 (77)
	Never	7 (10)	2 (5)	4 (15)
	Don't know	0	0	0
	Did not answer	5 (7)	3 (7)	2 (8)
Hepatitis C: positive diagnosis	Yes	16 (22)	8 (19)	6 (23)
	Never	47 (64)	28 (65)	17 (65)
	Don't know	2 (3)	1 (2)	1 (4)
	Did not answer	9 (12)	6 (14)	2 (8)
Hepatitis B: positive diagnosis	Yes	5 (7)	3 (7)	0
	Never	56 (76)	32 (74)	22 (85)
	Don't know	2 (3)	1 (2)	1 (4)
	Did not answer	7 (10)	7 (16)	3 (12)
HIV: positive diagnosis	Yes	3 (4)	2 (5)	0
	Never	58 (78)	33 (77)	22 (85)
	Don't know	2 (3)	1 (2)	1 (4)
	Did not answer	11 (15)	7 (16)	3 (12)

<sup>1</sup>Includes clients who did not describe their gender (n=5)

**Figure 6 Rates of BBV testing by gender (Males n=43, females n=26)**



**Figure 7 Rates of BBV diagnosis by gender (Males n=43, females n=26)**



## Needle sharing behaviour

Approximately half (49%) of all clients had ever used a needle that someone else had already injected with, with 28% having done so in the past month (table 7). Females were more likely to have shared a needle ever or in the past month than males. There was evidence of frequent sharing in the past month with 10 clients (14%) reporting injecting used a needle someone else had injected with on 6 or more occasions.

## Sexual health behaviour

Clients described the number of sexual partners they had been with in the past month and whether they always used a condom (table 7). Approximately half (47%) of clients reported having multiple partners in the past month, including a small proportion with five or more partners (7%). A minority (39%) of clients reported always using a condom during sexual intercourse. One quarter (24%) of participants reported receiving sexual health advice in the pharmacy, with females (39%) more likely to report this outcome than males (19%).

Table 7 Client needle sharing and sexual behaviours

		Total (n=74) n (%)	Males (n=43) n (%)	Females (n=26) n (%)
<b>Needle sharing</b>				
Injected using a needle someone else had already injected with – ever		36 (48)	17 (40)	18 (69)
Injected using a needle someone else had already injected with – past month		21 (28)	7 (16)	14 (54)
Number of times shared in the previous month	0	53 (72)	36 (84)	12 (46)
	1-5	11 (15)	3 (7)	8 (31)
	6-9	5 (7)	3 (7)	2 (8)
	10+	5 (7)	1 (2)	4 (15)
<b>Sexual behaviour</b>				
Number of sexual partners in the past month	0	20 (27)	14 (33)	6 (23)
	1	19 (26)	12 (28)	7 (27)
	2	17 (23)	7 (16)	7 (27)
	3	13 (18)	7 (16)	4 (15)
	4	0	0	0
	5 or more	5 (7)	3 (7)	2 (8)
Always use a condom during sexual intercourse		29 (39)	12 (28)	16 (62)

## D. Clients: Analysis of interview data

### Profile

All service user participants described injecting of heroin within a poly-drug taking repertoire involving other street drugs. One described smoking heroin prior to injecting. Two described injecting of amphetamines and heroin. One described injecting of steroids. Four were currently engaging with community drug projects.

## Needle sharing and disposal

Three reported prior experience of sharing of needles, and all were aware of potential risk of BBV transmission. One described reusing needles when not accessing the needle exchange. All with the exception of one reported attending regular screening for Hepatitis and HIV. Some reported sharing of needles on personal judgement of the health screening status of injecting partners. Comments included;

*'Nah I never share needles, never. The worst thing I'd do is I might use the same needle 2 or 3 times but it would just be myself like.'* Client Participant Number Three

*'Yeah, sometimes but most of the people I share with is clean like, so I'm told. They're up in the clinic so they're on the Hep [B] injection so they have to be clean so'.* Client Participant Number Five

The last comment also highlights some of the misinformation that clients may have regarding immunity offered by vaccination. Some participants described burning used needles for disposal before obtaining clean equipment from the needle exchange. Others described littering in public places. One service user described disposal in the local hospital. Current disposal ranged between return to the needle exchange through to continued prior habits of burning.

## Experience of Needle Exchange

All were satisfied with provision of the service. Experiences of accessing the pharmacies were generally positive with few comments around stigma associated with injecting drug use, or uncomfortable feelings on accessing the pharmacy. Participants were satisfied with the confidential nature of the exchange. Pharmacy staff were viewed as friendly and polite. Customers in one instance were described as staring at one service user when accessing the consultation room, but were for the most part considered to be unaware. Comments included;

*'It's great you just come in, you are not waiting around, it depends on how busy they are, but you just come in and you're not judged or nothing ya know. In some places you get like, for instance when I went to one place in [name of town] they just looked at me as if to say "you're just a scumbag" you know. Client Participant Number One*

*It's handy enough, it's easy like. All you have to do is go around to the counter and they tell you to come in here. And it's confidential like so people don't know what you're getting or anything so it's handy. Client Participant Number Two*

*It's been very good, even when it was up in the other chemist up there, I always found it great and I find the people nice like, they kind of don't look down on you. You know what I mean, they always have a smile, which is good, that's half the battle you know cause some people tend to look down on you ya know, and not everybody's perfect that's the way I look at it, everyone have their problems that's how I look at it, but as I say the people here are lovely, but the one up there is closed. I used to go in there and now here, and I find here very good. Client Participant Number Seven*

Clients made choices to use certain pharmacies based on location and staff attitude. Participants described *'keeping themselves to themselves.'* The consultation room was deemed useful in ensuring confidentiality alongside the unidentifiable black/grey packs in facilitating the exchange process. One participant said;

*'It's good because of the room, you can come into the room and they give you a bag n all so you're not walking out with a grey pack or little black pack or anything, so it looks like you're after buying something in the chemist. It's alright for me as well I'm on a crutch so people thinks I'm probably in getting something for my leg.'* Client Participant Number Three

## **Provision of Packs and Information**

Service users were generally satisfied with the kits provided, with one participant commenting on the need for groin injecting kits. Packs were particularly useful over weekends or when travelling. Comments included;

*'I think the 3 pack is very handy like and so is the 10 pack if you're going home or something the 10 pack is really handy like. The 3 pack is for well what I was using it for, was for emergency use you know, like you'd get through 3 of them in a few hours like.'* Client Participant Number Two

*'Yeah the kits are grand, but I'm gonna have to change to me groin because me veins are bollixed they are to be honest, so I'm gonna have to change to me groin, so the only thing is, when I change to me groin, the kits are gonna be no good for me, they won't work for me. The spoon and the citric and the water and the wipes be perfect still but the needle be no good for me.'* Client Participant Number Three

Leaflets in the provided needle exchange packs were described as very useful. Most service users described support and receipt of advice from the pharmacist in relation to wound care, safe injecting and sexual health. Requests for advice around health and treatment needs were reported as being handled positively, with such conversations usually being undertaken in the consultation room. Comments included;

*'Yeah you get the leaflet with the 3 pack, it's a good thing they give that because, I'm experienced, I know how to inject, but some people that may be starting wouldn't know but when actually they read that they'd know a lot more, its good that's in it.'* Client Participant Number Six

*'Well I've often asked her, like I missed myself one day and I came in my hand was out like that [points to hand] and I asked her and like she gave me good information like so you know, cause I couldn't get an appointment with [the doctor], so she gave me good advice.'* Client Participant Number One

## **E. Stakeholder survey findings**

Of the 12 stakeholders approached by the HSE PNEX Programme, six completed a brief survey examining their views on the effectiveness and impact of the Programme.

Stakeholders included representatives from drug services, the Irish Pharmacy Union and outreach services, although not all respondents described their role or organisation. Overall, the Programme was rated as being 'very effective' (n=3) or 'somewhat effective' (n=3). The overall increase in access to injecting equipment including out of hours availability and rural services was seen as the main strength of the Programme, alongside increased regular access to health professionals for individuals identified as vulnerable and often marginalised. It was perceived that increasing the availability of needle exchange services would raise awareness amongst PWID of the benefits of clean needles and of the availability of health services.

Stakeholders described some Programme weaknesses, including the difficulty in developing a true exchange highlighted by low numbers of returns, a lack of choice regarding equipment selection including the need for alternative needle sizes to allow injection into different sites (such as the groin) and lack of signposting to community drug services or outreach services. Issues relating to stigma were also described including the difficulties some pharmacies had encountered with local business owners and perceptions amongst other pharmacy customers. To improve the service it was suggested that work could be undertaken to reduce this stigma and that vaccinations for Hepatitis B should be provided opportunistically in the pharmacies, especially as needle exchange transactions may be the only encounter that many PWID have with a health professional. Increasing advertising of needle exchange services, for example in General Practices and community drug services, was also suggested.

## **Discussion**

Figures provided by the HSE PNEX Programme indicate that numbers of people attending the needle exchange services in pharmacies increased throughout 2013, suggesting that the programme is successfully engaging with PWID in Ireland and is increasing the numbers of PWID with access to clean injecting equipment and who are coming into contact with health professionals. To build upon this success it is important to understand the experiences of PWID and staff working with them to ensure continued engagement and effective service provision for those already accessing services, while also increasing access for other PWID not currently engaging.

Overall, clients expressed high levels of satisfaction with the service and staff indicated they generally felt the service was effectively engaging with clients. Generally both clients and staff recognised the benefits of the service and were positive about their experiences with each other. Although this study suggests that in the majority of cases clients had positive experiences with pharmacy staff, some clients reported dissatisfaction with staff attitudes and some staff found clients reluctant to engage with the service. Amongst a minority of staff, negative and stigmatising comments regarding needle exchange clients were recorded. In some cases staff had experienced difficulties with client behaviour in and near the pharmacy, and it was clear that some staff had expectations regarding nuisance behaviour and crime involving PWID. Similar findings have been reported elsewhere, where some pharmacists have disclosed negative attitudes towards PWID and although attitudes towards the provision of services in pharmacies for PWID have improved (Sheridan et al., 2007) they are still mixed (Eades et al., 2011; Mackridge and Scott, 2009; Scott and Mackridge, 2008). Generally staff attitudes in this study were very positive and as needle exchange becomes more imbedded into the pharmacy service in Ireland over time it is anticipated that attitudes will further improve.

#### *Discrimination, privacy and client engagement*

The experiences of clients and staff in this study was generally positive and negative experiences were in a minority. Client perceptions of negative staff attitudes and experiences of discrimination in NSP have been associated with increased risk of needle sharing activities (Wilson et al., 2014) and the impact of NSP services on BBV infection may be greater where clients engage in other health interventions in addition to needle exchange (Van Den Berg et al., 2007). Where PWID feel discriminated against they may be less likely to attend services and engage with staff and further interventions, which may lead to negative health outcomes. The attitudes of staff towards service provision may improve with increased experience of providing services (Matheson et al., 2007) and where the needle exchange is a new service within the pharmacy, it might be expected that attitudes and relationships with clients improve with familiarity, as was reported in this study by some staff. Additionally, the provision of training focussing on working with PWID is likely to improve attitudes towards this population (Scott and Mackridge 2008).

Increased contact and engagement between staff and clients is likely to increase trust and improve relationships. It was reported that transactions were typically quick and, particularly with new clients, there was a reluctance to engage fully. Where clients have concerns of how they are perceived by other customers or staff, they may be less likely to talk openly or engage with the service. Creating an environment where clients feel comfortable is therefore important to maximise the benefits of the service. Concerns about privacy and confidentiality have been identified as a barrier to the delivery of public health services in pharmacies (Eades et al., 2011; Saramunee et al., 2014) including to PWID (Mackridge et al., 2010). Guidance for UK pharmacies states that clients and pharmacists should be able to sit down together and speak to each other without being overheard by other customers or staff. The provision of consultation rooms where clients can discuss their drug use and related health concerns with pharmacy staff may lead to increased uptake of services and improved relationships between staff and clients.

### *Return rates*

Poor return rate of used equipment was commonly identified as a barrier to the service by staff. The World Health Organisation (2004) suggest that effective disposal systems for used equipment is vital for improving the safety of communities and tackling negative attitudes towards needle exchange programmes. In the UK, guidance published by the National Institute for Health and Care Excellence (NICE) suggests the provision of sharps boxes and public sharps bins following consultation with the local community to encourage safe disposal of used needles and equipment (NICE 2014). The mixed attitudes of pharmacy staff in this study on the best methods to encourage returns of used needles and equipment suggests that the provision of consistent information to pharmacy staff through training is required. Providing those using the needle exchange with advice and information on disposal and making it simple for them to make returns is likely to be beneficial. It is important to again consider the privacy of those clients who wish to safely dispose of their equipment in the pharmacy. With increased engagement between staff and clients in the pharmacy, it may be likely that rates of returns will improve.

### *Evolving drug trends*

For the majority of clients who inject psychoactive substances, the current needle packs, information from staff and available literature appeared to meet need. However, there was evidence that clients injecting performance and image enhancing drugs, including steroids and tanning agents, are presenting in the needle exchange. Staff participating in the survey reported that, after heroin, steroids were the most common drug injected by clients in their pharmacy. People who inject steroids have a range of different injection and health needs, and staff should be supported to provide the service to these clients through training and information. Additionally, flexibility in the needles and equipment that are offered to clients is important to meet the needs of those injecting steroids.

### *Referral to specialist services or other services for injecting drug users*

Data submitted by pharmacies to the HSE PNEX Programme indicates that low numbers of referrals were made in 2013, suggesting that increased referrals are needed not just for specialist groups but for all clients accessing pharmacy needle exchanges. However, low referral rates may be due to the small client group. It is therefore important that where there is need for specialist services staff have knowledge of local services and can signpost effectively. Very few staff reported provision of specialist services, such as to steroid injectors or the LGBT community, and signposting to external services for any client was infrequently reported by staff, which may reflect low presentation amongst these groups. It is important that services offered in pharmacies are integrated with external services for PWID to improve communication, the referral process and access to all available services. In the UK, NICE guidance recommends the commissioning of integrated care pathways for PWID (NICE, 2014).



### *Sharing of needles and BBV risk*

There was evidence that further work is required to reduce the risk of BBV transmission through the sharing of needles. Self-reported rates of BBVs compared favourable to the UK where medically verified data from the Unidentified Anonymous Monitoring survey (UAM) suggests prevalence of HIV (1%), hepatitis B (16%) and hepatitis C (49%) amongst PWID (Public Health England, 2014). However, past year rates of testing for HIV and Hepatitis C were considerably lower amongst participants in this UK study (HIV 41%, hepatitis C 42%) than those completing the UAM (HIV 76%, hepatitis C 82%) and it is feasible that rates of diagnosed BBVs would increase with improved uptake of testing. Further research may be needed to explore client attitudes towards testing for BBVs to identify the reasons for low testing uptake. Offering testing as part of the pharmacy needle exchange service and therefore improving access to testing may be an effective approach. There is currently limited evidence regarding the pharmacy as a setting for BBV services, however in the UK dry blood spot testing for hepatitis B and C in the pharmacy has been successfully offered in the pharmacy and linked into vaccination, referral and treatment pathways (Noble et al., 2010).

Rate of needle sharing within the past month in this study was 28%, compared to 16% amongst those completing the UAM. Amongst our sample, over half of females reported sharing needles in the past month with evidence of some frequent sharing. Rate of sharing of needles and equipment was reported by females to be higher than males in the UAM, although the genders were more comparable than in this study. Higher rates of needle sharing amongst women may be linked to experiences reported by female clients regarding privacy and staff attitudes when accessing needle exchanges. These may not be attitudes exclusive to PWID: a review of evidence regarding customer experiences of health services in the pharmacy suggests that women have generally reported positive attitudes about emergency hormonal contraception provision, particularly regarding access to and convenience of the service, but reported negative experiences regarding their privacy and the attitudes of staff (Eades et al 2011). Women may be at increased risk of needle sharing due to being under pressure to do so from partners and risk of intimate partner violence (El-Bassel et al., 2010; Wagner et al., 2010) and being more likely to be injected by a partner (Roberts et al., 2010). Risk of BBV transmission can additionally be greater amongst women due to pressure to have sex (Magnus et al., 2013), pressure not to use condoms (Roberts et al., 2010) and involvement in the sex trade. Increasing the focus on meeting the needs of women during the provision of training to staff is likely to be beneficial. Adopting strategies to help women identify the pharmacy service as friendly and confidential may be likely to encourage women to use the needle exchange more frequently. It is likely that further interventions such as tackling abusive or violent relationships, improving women's self-esteem and support for sex workers may also be needed, including consideration of outreach work to meet this and other at-risk groups (WHO, 2007). The World Health Organisation recommend that programmes working to prevent BBVs should focus on sexual risk behaviours of PWID (AIDs Projects Management Group, 2007) and increasing the amount of harm reduction advice, sexual health advice and provision of condoms in the pharmacies may be effective approaches.

### *Data monitoring processes*

Staff in this study identified that they believe it would be useful to capture more information about clients and also save time through not having to record the same information about clients on each occasion that they attend the service. Moving from a paper-based to computer-based system is likely to help with both these issues and increase efficiency in submission of data to the HSE PNEX Programme and centralised monitoring of data. Maintaining a client database within the pharmacy is likely to reduce the time needed to repeatedly enter some data, and enable staff to record information about each client that they can quickly return to when seeing a client. Having immediate access to information such as the client's history of drug(s) use, previous rates of returns and referrals will facilitate ongoing care of clients and increase potential for greater levels of engagement between clients and staff. This is likely to lead to increased trust between clients and staff, which in turn may reduce issues around the provision of inconsistent and false information described by some staff in this study. Pharmacies in the UK ask needle exchange clients for their initials and full date of birth, which allows them to form a unique attributor for each client. This allows data to be cross matched with other datasets, including data submitted by structured treatment services and allows monitoring of referrals between services. There is no evidence in the UK or Ireland that neither pharmacy staff nor clients take issue with the provision of this information.

It is recognised that there were some limitations to this study. Needle exchange clients who participated represented only 13 of the 70 pharmacies that took part in the study. Due to the large number of pharmacies eligible to take part, responsibility for the recruitment of clients was largely placed on staff in pharmacies who opted in to the client research strand of the study. Although 28 pharmacies agreed to recruit clients, 15 of these pharmacies did not return any client questionnaires. It is presumed that in some pharmacies few clients would have accessed the needle exchange during the study period. However despite the small proportion of pharmacies in which clients participated, pharmacies from all regions of Ireland were represented by the client survey. Secondly, due to the relatively small client sample the numbers of males and females in the analysis by gender were low findings relating to needle sharing, sexual health behaviours and BBV prevalence by gender need to be treated with caution. Data regarding BBV testing and BBV diagnosis were self-reported by clients, preventing a full comparison with UK verified BBV data. It might be anticipated that clients were likely to under report a diagnosis of a BBV. Additionally, a number of clients chose not to answer questions relating to their BBV status.

## Conclusion

Overall the evidence in this study suggests that the PNEX programme is acceptable and accessible to PWID in Ireland, and largely supported by pharmacy staff. Figures provided by HSE suggest that numbers of clients accessing the needle exchanges increased during 2013, suggesting that the programme is successfully engaging with the injecting drug using population in Ireland and increasing access and coverage of needle exchanges and access to health professionals. Despite these successes, there are a number of approaches that can be taken to improve service provision and further meet client need. It is important that PWID feel comfortable accessing services and are confident in their privacy and that they will be treated with respect. While in most cases the evidence suggests this is already happening, with time and additional training for staff regarding the nature of drug use and client need, engagement between staff and clients is likely to further improve. Additionally, pharmacies need to be better linked in with other health services available to this population and the provision of a range of health interventions and information such as BBV testing, harm reduction, wound care and sexual health advice will further increase the effectiveness of pharmacy needle exchange services.

## Recommendations

1. Provide a wider range of equipment or packs suitable for all clients. Consider the inclusion of needles suitable for injecting steroids and into the groin, condoms and sexual health literature in packs. Additionally, the possibility of providing pick and mix services in addition to pre-prepared packs is likely to better meet client need.
2. Develop integrated care pathways to link the PNEX programme with other services for PWID such as drug agencies and sexual health services. As more health interventions become embedded within the pharmacy, this is likely to become increasingly important to prevent pharmacies from becoming isolated from other related organisations providing services for injecting drug users.
3. Consider offering within-pharmacy testing for BBVs. Where this is not possible, ensure that pharmacy staff have sufficient information on local services to enable efficient referral processes and signposting. Improving the links between pharmacies and other drug-related services will increase referral and uptake of referrals.
4. Increase frequency of training provision for pharmacy staff and include information about anabolic steroids, melanotan and associated PIEDs to help staff provide services to customers who inject these drugs. Training needs to be constantly reviewed to ensure that it is meeting the needs of pharmacy staff. The profile of PWID is likely to change and therefore the knowledge and skill requirements of staff will change too, leading to the need for top up training. For example, this study suggests that use of new psychoactive substances by pharmacy needle exchange clients is low at present, but in the UK use of these drugs is rapidly increasing. If use in Ireland increases then pharmacy staff are likely to require training relating to these substances.

5. Ensure that staff have sufficient training and knowledge about drug use and health related issues to confidently provide harm reduction advice and support in the pharmacy. Explore with staff their training requirements to ensure that packages are useful and review the impact of training to identify whether this leads to improved knowledge and practice.
6. Encourage through training and information for staff a consistent approach to increase returns improved engagement with clients and educating and reinforcing clients on the need to return equipment and the reasons for this. Additionally, build on current work being undertaken regarding appropriate community responses to drug related litter.
7. Oversee the transition from a paper-based monitoring system to an electronic data monitoring system to be used by all pharmacies participating in the needle exchange programme. This will improve efficiency and improve the ongoing care of clients through enabling pharmacy staff to access information about clients, which will help improve client engagement and service delivery.

#### *Recommendations for research*

1. Communication between the HSE PNEX Programme, the Irish Pharmacy Union and pharmacy staff regarding the purpose of future research is important. Involving pharmacy staff in the development of the evaluation may be beneficial to increase awareness and acceptance of an evaluation.
2. Future evaluations should use the same measures to allow comparison on outcomes as an indication of programme development. Additionally, to gain a more accurate picture of BBV prevalence that does not rely on self-reported data, it would be useful to explore the possibility of collecting biological samples from clients. For example in England, PWID who participate in the Unlinked Anonymous Monitoring Survey are asked to provide a dried blood spot sample for this purpose, which is anonymously tested for HIV, hepatitis C and hepatitis B.

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